

REMARKS

A. Request for Reconsideration

Applicant has carefully considered the matters raised by the Examiner in the outstanding Office Action but remains of the position that patentable subject matter is present. Applicant respectfully requests reconsideration of the Examiner's position based on the amendments to the specification, the amendments to the claims and the following remarks.

B. The Invention

The present invention is directed to a printing method employing a planographic printing plate material which has been developed with used dampening water.

In one of the novel aspects of the invention, the used dampening water which has been filtered and re-circulated for re-use is employed to develop the planographic printing plate material. Applicant has discovered that stable printing conditions can be obtained, even though used dampening water which has been re-circulated is employed to develop the planographic printing plate material (page 9, lines 2-6).

C. Claim Status and Amendments

Claims 1-10 are presented for further prosecution.

Claim 1 has been amended to clarify that the printing plate is developed with either dampening water or both dampening water and printing ink. In either case, the dampening water is used dampening water that has been re-circulated and filtered. Support for this amendment can be found at page 12, lines 12-23, where it is explained that part of the image forming layer is removed with dampening water "and/or" ink, and where it is also explained that the exposed printing plate is developed with "dampening water and printing ink". In other words, the used, re-circulated, filtered dampening water may have ink in it and it is the used dampening water that is employed to develop the planographic printing plate

D. Specification Amendments

Page 12 has been amended to correct a minor typographical error.

Page 14 has been amended to state that the hydrophobic precursor particles are preferably thermoplastic particles or microcapsules encapsulating oleophilic materials. Support for this amendment can be found in claim 2, and at page 20, lines 5-6.

E. The Office Action

Claims 1-3 and 5-10 had been rejected as being unpatentable over Mori (US 2002/0172891) in view of Kawate (JP 2002-059531). Claim 4 had been rejected as being unpatentable over Mori in view of Kawate and Mizuno (EP 1203663). Claim 1 had been objected to as being indefinite.

Mori had been cited to teach a printing method including the steps of exposing, developing with dampening water and/or printing ink, and printing using a planographic printing plate. The Examiner had recognized that Mori does not teach re-circulating and filtering the dampening water or dampening water/printing ink. Kawate had been cited to teach re-circulating and filtering the dampening water or dampening water/printing ink. The Examiner had taken the position that it would be obvious to re-circulate and filter the dampening water or dampening water/printing ink of Mori based on the teachings of Kawate.

1. The surprising and unexpected results of the present invention

The present invention is directed to developing a specific type of printing plate material, namely, a planographic printing plate material that is developed on a printing press with re-

circulated and filtered dampening water or with both re-circulated and filtered dampening water and printing ink.

In the field of planographic printing employing a printing plate material developed on a printing press, fresh dampening water is conventionally used to develop the printing plate material. Fresh water is conventionally used since those skilled in the art believe that used dampening water which can be contaminated with printing ink cannot adequately develop a planographic printing plate. Thus, those skilled in the art do not develop planographic printing plate materials on a printing press using re-circulated dampening water or re-circulated dampening water/printing ink.

However, in contrast to conventional thinking, Applicant has surprisingly discovered that the method of the present invention provides equal printability and tolerance compared to developing using fresh water. This surprising discovery is contrary to the expectations of those skilled in the art, since those skilled in the art expect printing results to be worse when re-circulated filtered dampening water or when re-circulating filtered dampening water/printing ink is used to develop the material.

The present invention has therefore been made based on the surprising and unexpected discovery that the method of claim 1 provides equal printability and tolerance compared to developing using fresh water. Thus, contrary to conventional thinking, Applicant has discovered that stable printing conditions can be maintained without the need of fresh water to develop the printing plate.

The surprising and unexpected results of the present invention can be seen by comparing Experiment 1-1 with Experiment 1-3 and by comparing Experiment 3-1 with Experiment 3-3 at pages 62-67 of the application.

In Experiment 1-1 at page 62, line 18 of the application, fresh dampening water was employed to develop printing plate material sample 1. Initial printability for Experiment 1-1 was 10 sheets and water tolerance was 70 (evaluation method described at page 62, lines 1-17). In Experiment 1-3 at page 63, line 17 of the application, contaminated dampening water was re-circulated and filtered to develop printing plate material sample 1, and the initial printability and tolerance results were the same as in Experiment 1-1 (page 64, lines 1-4). A similar comparison can be made between Experiment 3-1 at page 65, line 22 and Experiment 3-3 at page 66, line 17 of the application.

Thus, by comparing Experiment 1-1 with Experiment 1-3, and by comparing Experiment 3-1 with Experiment 3-3, it can be seen that developing with fresh water provides the same results as developing with contaminated water that is re-circulated and filtered.

The results described above are contrary to the expectations of those in the art, since it is believed that developing with contaminated ink that is re-circulated and filtered would not produce acceptable results for the specific type of printing plate material recited in claim 1.

2. It would not be obvious to re-circulate and filter the dampening water or dampening water/printing ink of Mori based on the teachings of Kawate

Kawate teaches a re-circulation technique for water used during printing (see par. 4 of the enclosed computer translation of Kawate obtained from the JPO website). Kawate does not teach that his offset printing method employs a printing plate material that is developed on a printing press as recited in claim 1, nor does Kawate teach developing the printing plate material on the printing press with re-circulated, filtered dampening water. Thus, a strict combination of Mori and Kawate does not teach re-circulating dampening water to develop the printing plate material recited in claim 1.

As explained in section 1 above, Applicant has surprisingly discovered that employing the filtered, re-circulated dampening water to develop the planographic printing plate material provides adequate results, contrary to the expectations of those skilled in the art. Kawate is a type of printing method that does not employ a planographic printing plate material developed on a printing press. In fact, Kawate is described at page 8, lines 4-13 of the application, i.e., see JP Pub. No. 2002-59531 on line 13 of page 8.

Thus, even with the knowledge that re-circulating dampening water during printing exists based on the teachings of Kawate, those skilled in the art do not expect that a planographic printing material can be adequately developed on a printing press as recited in claim 1. Thus, even with the knowledge of Kawate, Applicant respectfully submits that the printing method of claim 1 is not obvious.

In order for a claimed invention to be obvious, there must be some teaching, suggestion or motivation in the art to arrive at the claimed invention. The Examiner had apparently recognized that Mori and Kawate do not teach or suggest re-circulating dampening water for a developable printing plate material. In addition, in this instance, Applicant respectfully submits that there is also no motivation to arrive at the claimed invention, since those skilled in the art believe that

adequate printing cannot be performed by developing the plate with re-circulated dampening water.

It is respectfully submitted that the present invention is patentable over Mori and Kawate, since Mori and Kawate do not teach or suggest re-circulating dampening water for developing the printing plate material, and those skilled in the art would not re-circulate dampening water for developing the printing plate material.

F. Claim 4

Claim 4 had been rejected based on a combination of Mori, Kawate and Mizuno (EP 1203663). Mizuno had been cited to teach a filter that employs an adsorption ability due to zeta potential.

Mizuno does not teach or suggest the present invention recited in claim 1. It is submitted that all the claims are patentable over the cited references taken alone or in combination.

G. Conclusion

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance and such action is respectfully requested. Should any extensions of time or fees be necessary in order to maintain this Application in pending

condition, appropriate requests are hereby made and  
authorization is given to debit Account # 02-2275.

Respectfully submitted,

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Encl: Computer translation of Kawate (JP 2002-059531)  
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